ds

Set	Items	Description
S1	81	SCLERA AND NUCLEIC(W)ACID
S2	60	RD (unique items)
S3	2	S2 AND DELIVER?
S4	20	SCLERA AND GENE(W)TRANSFER
S5	11	RD (unique items)
S6	4	TRANSSCLER? AND GENE(W)(TRANSFER OR DELIVERY)
S7	4	RD (unique items)
S8	1266	GENE(W)(TRANSFER OR DELIVERY) AND EYE
S9	780	S8 NOT PY>2000
S10	8	S9 AND INTERIOR
S11	7	RD (unique items)
S12	55	S9 AND EYE/TI
S13	22	RD (unique items)

AMJ
4/29/03
Dialog
file: medicine

5/3,AB/10 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

14698646 22578072 PMID: 12692592

Periocular injection of an adenoviral vector encoding pigment epithelium-derived factor inhibits choroidal neovascularization.

Gehlbach P; Demetriades A M; Yamamoto S; Deering T; Duh E J; Yang H S; Cingolani C; Lai H; Wei L; Campochiaro P A

Gene therapy (England) Apr 2003, 10 (8) p637-46, ISSN 0969-7128
Journal Code: 9421525
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: In Process

Gene transfer provides an exciting new approach for the treatment of retinal and choroidal diseases. Two areas of concern are the potential for vector-related toxicity and uncertainties associated with prolonged transgene expression. One way to address these concerns for transfer of genes encoding secreted proteins is to transduce cells on the outside of the eye, provided the gene product can gain access to the eye and have the desired effect. In this study, we investigated the feasibility of this approach. Periocular injection of an adenoviral vector encoding beta-galactosidase (AdLacZ.10) resulted in LacZ-stained cells throughout the orbit and around the eye. Compared to periocular injection of 5 x 10(9) particles of control vector, periocular injection of 5 x 10(9) or 1 x 10(9) particles of an adenoviral vector expressing pigment epithelium-derived factor (PEDF) regulated by a CMV promoter (AdPEDF.11) resulted in significantly elevated intraocular levels of PEDF and suppression of choroidal neovascularization. Periocularly injected recombinant PEDF was also found to diffuse through the **sclera** into the eye. Although similar experiments are needed in an animal with a human-sized eye, these data suggest that periocular **gene transfer** deserves consideration for the treatment of choroidal diseases.Gene Therapy (2003) 10, 637-646. doi:10.1038/sj.gt.3301931

13/3,AB/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10320595 BIOSIS NO.: 199698775513
Gene transfer **to the retina of rat by liposome** eye **drops.**
AUTHOR: Matsuo Toshihiko(a); Masuda Ikuya; Yasuda Tatsuji; Matsuo Nobuhiko
AUTHOR ADDRESS: (a)Dep. Ophthalmol., Okayama Univ. Med. Sch., 2-5-1 Shikata-cho, Okayama City, Okayama 700**Japan
JOURNAL: Biochemical and Biophysical Research Communications 219 (3):p 947-950 1996
ISSN: 0006-291X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: **Gene delivery** to the intraocular tissues of the retina is hampered by complicated surgical interventions to administer the gene. Here we showed that instillation as **eye** drops of an expression plasmid vector for beta-galactosidase gene carried by the specific kinds of liposomes could transfer the gene to the retinal ganglion cells of rat, without causing any inflammation. This non-surgical, convenient way for **gene delivery** to the retina would facilitate the development of treatment for various intraocular diseases.
1996

13/3,AB/16 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

11791783 99230666 PMID: 10214051

Induction of genes into the rabbit eye **by iontophoresis]**

Asahara T; Shinomiya K; Naito T; Shiota H
Department of Ophthalomogy, University of Tokushima School of Medicine, Japan.

Nippon Ganka Gakkai zasshi (JAPAN) Mar 1999, 103 (3) p178-85, ISSN 0029-0203 Journal Code: 7505716
Document type: Journal Article ; English Abstract
Languages: JAPANESE
Main Citation Owner: NLM
Record type: Completed

PURPOSE: After inducing 6-carboxyfluorescein (6-FAM)-labeled phosphorothioate oligonucleotides (S-ODNs) noninvasively into albino rabbit eyes by iontophoresis, we assessed the transfer of S-ODNs into the ocular tissues, their stability, and the possible presence of injury to the ocular tissues. METHODS: The iontophoresis group consisted of 12 eyes of 6 rabbits and the control group consisted of 4 eyes of 2 rabbits given **eye** drops containing S-ODNs. Aqueous humor and vitreous humor were collected after iontophoresis, subjected to electrophoresis with a fluorescent DNA sequencer and analyzed by the Gene Scan program. Frozen sections at 10 microns were prepared for observations under a fluorescent microscope. A plasmid 4.7 kbp in size that expresses green fluorescent protein (GFP) was induced into 18 eyes of 9 rabbits by the same procedure. RESULTS: In the iontophoresis group, S-ODNs were detected in the anterior chamber 5 minutes after electrophoresis and in the vitreous 10 minutes after. These S-ODNs maintained the same length as at the initial synthesis. S-ODNs could also be detected in the posterior retina 20 minutes after electrophoresis. No evidence of degeneration or inflammation due to the above procedure was found in the ocular tissues. Fluorescence showing GFP gene expressions were found in the cornea, the anterior chamber angle, and the ciliary subepithelial tissues. CONCLUSIONS: These findings show that iontophoresis is an effective method to induce gene into rabbit eyes.